

## ANALYSIS OF THE IMPACT OF CORRUPTION INDEX, EDUCATION AND SOCIAL CAPITAL ON ECONOMIC DEVELOPMENT

Željko Požega\*, Boris Crnković\*\*, Goran Sučić\*\*\*

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*This study analyzes the corruption index, educational index and index of social capital, compared to the degree of development of the world's countries. It is divided into three parts. The first part gives a brief theoretical review of the importance of different components of human capital on the personality and companies' business results, with additional analysis of influences (relevance factors) of each of the observed segments of human capital. In second part of the paper, the methodology and data used in the empirical research are discussed. Furthermore, results of the empirical research are analyzed, which tested the hypotheses on the influence of human capital and its components to the level of economic development. The goal of the research was to test the hypothesis on human capital, as having a positive and significant influence on the world's economic development. In addition, it was hypothesized that the countries with the more developed human capital are, on average, more developed and have a larger growth rate. Furthermore, this study tested the hypothesis on segments of human capital also having a positive influence on the world's economic development, with, on average, moral capital having the most significant influence, followed by intellectual and social.*

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\* Željko Požega, Ph.D., Assistant Professor, Faculty of Economics Osijek, Gajev trg 7, 31 000 Osijek, Croatia, Phone: +385-31-224-454, +385-91-22-44-099, Fax: +385-31-211-604, E-mail: [zpozega@efos.hr](mailto:zpozega@efos.hr)

\*\* Boris Crnković, M.Sc., Assistant, Faculty of Economics Osijek, Gajev trg 7, 31 000 Osijek, Croatia, Phone: +385-31-224-434, +385-91-22-44-103, Fax: +385-31-211-604, E-mail: [bcrnko@efos.hr](mailto:bcrnko@efos.hr)

\*\*\* Goran Sučić, Ph. D., Faculty of Philosophy Split, Teslina 12, 21 000 Split, Croatia, Phone: +385--320-646, E-mail: [goran.sucic@ffst.hr](mailto:goran.sucic@ffst.hr)

## 1. INTRODUCTORY DISCUSSION

This study analyzes the corruption index, educational index and index of social capital of the world's population, compared with the degree of development of the world's countries. Data are collected in 52 countries and indicators of different segments of human capital (moral, intellectual and social) for 2008 are calculated. For the purpose of this study, the variable of the Corruption Index represents moral capital, the variable of the Prosperity Education Index represents intellectual capital, the variable of the Prosperity Social Capital Index represents social capital and the GNP per capita (GNP p.c.) represents the world's economic development. The dataset has been published by the London Legatum Institute in 2009.

## 2. THEORETICAL OVERVIEW OF THE DIFFERENT SEGMENTS OF THE IMPORTANCE OF HUMAN CAPITAL

According to Lauc (2000), the development equation is:

$Y = ax_1 + bx_2 + cx_3 + dx_4 + ex_5 + fx_6$ , where:

- Y equals overall development,
- a to f are relevance factors of independent variables,
- $x_1$  is employee motivation,
- $x_2$  are the knowledge and skills of employees,
- $x_3$  are co – relations,
- $x_4$  - technical equipment,
- $x_5$  - money and
- $x_6$  - surroundings of the system observed.

The ratio of relevance factors is as follows:

$$a > b > c > d > e > f,$$

which leads to the conclusion that moral capital is the most important and correlates most highly with the level of economic development, being followed by intellectual, and finally, social capital.

According to Brooks and Nafukho (as cit. by Edvinsson, 2003), relations among human resources development, social capital, emotional intelligence and organizational productivity are characterized by a high positive correlation. These authors have contextualized the interaction between the aforementioned

variables through an integrated model. The model develops a framework for the possible use of innovative development instruments. The same authors define the development of human resources as a free system used in companies for the development of a single individual through training and the expansion of his/her career, which then expands the development of the company itself.

McLean (as cit. by Milkovich & Boudreau, 1991) defines the development of human resources as any process or activity which, in a short or a long period, develops work, based on knowledge, expertise, productivity, etc. Gilley and Maycunich (as cit. by Nadler & Nadler, 1991) define human resources development as a process of simplified organizational learning and changing through organized interventions/initiatives and management activities, with the goal of improving organizational characteristics. Schmid and Robinson (as cit. by Walker, 1992) discovered that social capital and mutual relations have a positive effect on economic transactions, production, trust and readiness for risk-taking. Benefits of social capital include the decrease of transaction expenses, because they facilitate cooperation with business clients and coordination of business processes, improve negotiations and reduce the number of business pressures, false information and unnecessary bureaucracy. Salovey and Mayer (as cit. by Milkovich & Boudreau, 1991) describe emotional intelligence as an intellectual process included in the recognition, usage, understanding and management of one's own and other emotional conditions and as being able to use those emotions for motivation, planning and achieving success. Therefore, emotional intelligence, which may be a part of the concept for developing social capital within the company, and as a part of a wider concept of the development of human resources, may influence the productivity of an economic subject.

Thus, Brook and Nafukho's model illustrates the connection between the development of human resources, emotional intelligence, social capital and productivity. In this model, inputs are variables which help the development of social capital. These inputs include processes and functions of the development of human resources such as: individual development, career development and organizational development. Individual development focuses on the importance of training employees and the need for life-long learning. For example, author Martin determined, in his longitudinal study of a well-known Scottish company, that there is a positive correlation between a life-long learning program and perception of employees on careers and honesty. Further, the model explains additional inputs which are important for social capital development and which include a need to understand the emotional needs of people in companies, therefore the need to investigate emotional intelligence. Hence, clear knowledge

and understanding of the emotional intelligence of employees should help create an organizational environment which leans to social capital development. Arrows in both directions which link the variables with social capital illustrate an open relation between the two of them. Therefore, those variables influence the development of social capital and vice versa. Social capital can be described as an inconceivable process which produces competitive advantage and productivity when it is interacting with other variables of the model like emotional intelligence, skills, knowledge and attitudes of people which were acquired through various programs of human resources development. Apart from an inert environment in a company, there is an external environment which may influence the economic subject as the model describes. As it seems that there is a clear connection between human resources development, social capital, emotional intelligence and organizational productivity, it is hard to create measuring instruments which can show the contribution of each one to organizational productivity.

Cantrell, Benton, Laudal & Thomas (Ivancevich, 1995) have tested the scheme of human resources development on more than 60 companies where the results have shown considerable improvement of financial results with the improvement of human resources development. The scheme provides a tool for economic subjects to assess the investment profitability in human capital and help the management of the company to determine the diagnosis of its strength and weakness of human capital and to make a list of priorities and make a connection between the investment in human resources, business practice and business results. Research has shown that companies with more developed human resources have better financial results, or to be more precise, these organizations that focus on processes dedicated to three key areas: creating a strategy of human resources development in accordance with a business strategy, ensuring a supportive working environment, and development of employees that are ready to learn, achieve far more better financial results than those companies that do not. The scheme results in the discovery that economic subjects should identify the demand for learning and training and ensure that managers work more hours with their employees as their teachers and mentors and that they develop with them a planned study.

Business ethics has originated from the consideration of relations between economy and moral, consideration of a moral status of economic procedures, practices and moral traits of market relations. According to Collins & Devanna (as cit. by Becker, 1997), business ethics has two points of perspective: ethical and business (economic). The business perspective derives from economic values: usage, profit, cost, price, efficiency and competition. The ethical

perspective is derived from moral values: honesty, justice, reliability, trust, rights and duties, or everything which can be marked as “good” or “right” in a moral way.

Intellectual capital, according to Armstrong (as cit. by Pulić & Sundać, 2001), in fact, has an objective to clarify the differences between the accountancy value and market value of a company, where the market value represents the sum of values of all the company's shares, and the accountancy value represents the actual value of physical and financial belongings. With that, the value of a business subject is shown more precise and in more detail, which can be of significant value for potential investors. In fact, only if we are aware of the basic values of our company and with which intellectual capital we dispose, only then will we know how to manage it in a way to maximise the growth of the mentioned values.

It is important to point out that managing intellectual capital, according to Marušić (2001), does not include only managing with the knowledge of employees, but the process of creating knowledge and values within the company and also the process of gathering knowledge outside the borders of a company. We must not forget how the investment in employees is not considered as a business expense but as an investment. That is the difference between human resources accountancy which treats employees as a company's means, and traditional accountant approach which observes employees as an expense. Employees invest their knowledge and abilities, and the result is extra value created and confirmed by the market. Traditional success indicators of business success such as total income, profit or currency flux, reflect, less and less, the real business capability of companies because they do not show us whether the companies create values or not.

Frank & Bernanke (2001) divide the successful management of intellectual capital in companies into several stages. The first stage is to determine where the necessary knowledge is situated and how to reach it, how to train employees to obtain the knowledge. The next stage should define the possibilities of the usage of knowledge and then secure the functionality of the system and keep it up to date. Thus, initially, it is important to create an awareness of the importance of that resource in the whole organization and to visualize and categorize the intellectual capital of the company.

Chen, Zhu & Xie (as cit. by Walker, 1992) have created a measurement model and a precise and quality system for the determination of intellectual capital to provide companies a good tool to manage their intellectual capital.

Based on a few models of measurement of intellectual capital conducted by scientists of the western world, the model of the mentioned authors classifies intellectual capital within human capital, structural capital, innovative capital and consumer's capital. Through their empirical study, the listed authors have discovered and proved significant the connection between the values of each of the four elements of the intellectual capital of a company as well as a link between the elements of intellectual capital and business results which an economic subject achieves. Throughout their researches, they have evaluated the importance of each factor of intellectual capital in companies and have come up with the following formula:

$$IC_i = \sum_{j=1}^m C_{ij} \times Q_{ij} \sum_{j=1}^m Q_{ij}, \text{ where:}$$

- $IC_1$  - human capital,
- $IC_2$  - structural capital,
- $IC_3$  - innovative capital,
- $IC_4$  - consumer capital,
- $C_{ij}$  - factor value,
- $Q_{ij}$  - rank from 1 to 3 and
- $m$  - number of intellectual capital factors.

By calculating the coefficient of the linear correlation amongst individual types of intellectual capital and business results of companies, the authors have found out that the coefficient of the linear correlation of human capital and business results is 0.678, structural capital and business results equals 0.733, innovative capital and business results is 0.824, consumer capital and business results is 0.798 and finally, the intellectual capital total and business results is 0.928. Analysis of the linear correlation of the types of intellectual capital has shown that the coefficient of the linear correlation of human capital and structural capital is equal to 0.748, between human and innovative capital is 0.681, amid human and consumer capital equals 0.833, between structural and innovative capital is 0.769, between structural and consumer capital is 0.858, and finally, between innovative and consumer capital equals 0.786. The analysis shows a significant correlation between all four elements of the intellectual capital and business results of the economic subject. As a result, the management of a company has to be able to determine and improve the level of a company's intellectual capital as well as the objective which guarantees a dominant position in today's knowledge-based economy.

Social capital, according to Baker (2004), expresses itself when we interact with other people, when interactions are made and networks which we realize are based on mutual values. Social capital represents social trust, a link with which we contribute to coordinated and cooperative labour with other people for our mutual benefit. In short, social capital is important to us because it influences more intensive involvement in a company's activities and labour successfulness, warns us about the fulfillment of obligations, affiliation and loyalty to the economic subject which we work for.

From a company's point of view, social capital starts to look interesting only if it is directly transformable into economic capital. For example, according to Simmons (as cit. by Vidović, 2003), if we have an expressed social capital and we expand our circle of people in that way, we reduce our dependence of a singular source and come to new sources, new people which offer us useful advice and information. With our social capital, we establish and expand trust which represents a foundation for our company's prosperity and for economic development in general. In companies which have a high level of social capital between its employees, the quality and quantity of spreading information is improved; transparency, credibility, responsibility of employees and their activities are greater; and obtaining external resources and public services is easier.

According to Bourdieu (as cit. by Fellmann, Getis & Getis, 1990), social capital is the sum of actual and potential resources which are linked with having permanent networks of more or less institutionalized relationships through mutual acquaintances. Adler and Kwon define social capital as relations between individuals and organizations which ease activities and produce values. According to Nahapiet and Ghoshal, social capital is made of three dimensions: structural social capital (networks between employees), relation social capital (the quality of networks) and cognitive social capital (the proportion of systems of rewarding employees and systems of valuing their networks). The same authors claim that there are four dynamic factors that create a development of social capital: stability, interactions, interdependency and closure.

Arregle, Hitt, Sirmon & Very (as cit. by Nadler & Nadler, 1991) divide social capital into family capital and organizational capital. Wallis, Killerby & Dollery (as cit. by Fellmann, Getis & Getis, 1990) have come to the conclusion that social capital on a high level, trust and creating personal and business networks significantly contribute to economic development and that social capital may result and give its contribution in the accumulation of different types of capital, improvement of skills, innovations, transfer of information and technology, reduction of transaction expenses, etc. Also, social capital may

significantly ease management, increase investments, reduce social expenses of crime, corruption and other forms of uncooperative behavior. On the contrary, a low level of social capital may limit activities in the economy, reduce the exchange of ideas and lead to lower rates of refund.

The standard model of production by Hall & Jones (as cit. by Nadler & Nadler, 1991) is supplemented with the relation of social capital with other factors of production in the following way:

$$y_i = \left( \frac{K_i}{Y_i} \right)^{1-\alpha} \left( \frac{H_i}{L_i} \right)^{\alpha} A_i, \text{ where:}$$

- $y_i$  - output per employee,
- $Y_i$  - total output,
- $K_i$  - physical capital,
- $L_i$  - labour,
- $H_i$  - human capital and
- $A_i$  = unit of technological prosperity.

Woolcock & Narayan (as cit. by Gardner, Kornhaber & Wake, 1999), in their research model of social capital, divide it into the civic social capital component and government social capital component. Civic social capital includes general society principles, norms of cooperation and networks of different associations. Government social capital relates to formal institutions and their work and efficiency. Their model illustrates how civic social capital and government social capital may fulfill each other in different situations and with different consequences, depending on a low or high level of social capital and the level of institutional functioning, from conflicts and hidden conflicts to economic and social well-being.

In their analysis of productivity, Nerdmum & Erikson (as cit. by Zoričić, 1996) present the individual boundary product of a worker as a function with three different types of inputs. The first input are the available working hours; the second one is the total of human potential of different types and qualities; while the third input represents other abilities with a positive or negative influence on a worker's productivity, such as physical and psychological endurance, etc., and which can be changed and improved right through investments in human capital. An investor in human capital will, foremost, accumulate and invest in general abilities and skills, often through formal and non-formal education and then invest in the education of specific knowledge



and skills, by which he will reduce the risk of unemployment or the risk of low rates of investment return. After that, human and intellectual capital is accumulated through specialized investments such as many different types of business training.

In his research on the influence of education on the GNP, Barro (as cit. by Bahtijarević-Šiber, 1999) has proven that the growth rate of those enlisted in primary education by 1% provides an increase of the GNP growth rate of 2.5%, while the growth rate of those enlisted in secondary education by 1% provides a 3% increase of the GNP growth rate. Levine and Renelt found out that primary education makes a 3.17% increase of the GNP growth rate, secondary education 2.5%, and tertiary 3.71%. Murphy, Schleifer & Vishny (as cit. by Walker, 1992) got the results of 2.2% of the GNP growth rate for primary education; Hanushek & Kim (as cit. by Walker, 1992) got 3.6% for secondary education; Gemmel (as cit. by Walker, 1992) got 2.68% for primary education, 1.09% for secondary and 5.89% for tertiary; Judson has a result of a 1.5% increase of the GNP growth rate for secondary education; Benhabib & Spiegel (as cit. by Walker, 1992) provided a value of 12 – 17% increase of the GNP growth rate for tertiary education; while De La Fuente & Domenech (as cit. by Walker, 1992) have a value of a 3% growth rate of the GNP for the average education; and finally, Bassanini & Scarpetta (as cit. by Walker, 1992) have a value of a 6% increase of the GNP growth rate for the average education.

Smith (as cit. by Krugman & Obstfeld, 2003) considers education and studying as an investment in human capital, Marshall (as cit. by Ivancevich, 1995) values human capital the most of all kinds of capital, Fisher (as cit. by Frank & Bernanke, 2001) emphasizes human capital when he is analyzing capital and rates of refund, while Schultz and Mincer (as cit. by Walker, 1992) consider human capital as an independent category of capital. On the other hand, Blaug (as cit. by Krugman & Obstfeld, 2003) classifies human capital in six categories: formal education, business trainings, information obtaining, applying for jobs, work migration and investment in health.

According to Perez & Pablos (as cit. by Deželjin, 1996), in the new economy of the 21st century, accomplishing a sustainable competitive advantage depends on the capability of a company to develop resources based on knowledge. The authors suggest accomplishing the competitiveness of each company by developing three different fields of research: knowledge management, intellectual capital and strategic management of human resources. According to them, there are four levels which define the process of knowledge management within an economic subject, which are: the creation or retention of

knowledge, structuring and giving values to knowledge obtained, transferring of knowledge and establishing a mechanism for the usage of that knowledge as for individuals so for groups and teams within companies. The traits of organizational knowledge or knowledge of an economic subject are that knowledge cannot be commercialized, it develops and accumulates within companies, it bases its position upon the knowledge and skills of employees, it is strongly connected to a company, it has a low level of mobility and its development depends on a level of studying, investment in human capital, etc. Hayek (as cit. by Walker, 1992) divides organizational knowledge or economic subject knowledge into scientific and practical, Penrose (as cit. by Walker, 1992) divides it into unbiased and experience-based, Winter (as cit. by Walker, 1992) into procedural, Zuboff (as cit. by Walker, 1992) into incorporated, Badaracco (as cit. by Walker, 1992) into variable and Blecker (as cit. by Walker, 1992) divides it into protected, but the most accepted and used is the division made by Polany (as cit. by Walker, 1992): explicit and hidden (or tacit knowledge).

### **3. DATA COLLECTION AND RESEARCH METHODOLOGY**

Collected data concern the pattern of 52 countries and their statistical information on segments of human capital (moral, intellectual and social) for 2008.<sup>1</sup> For research needs, the variable of the Corruption Index represents moral capital as a part of human capital, the variable of the Prosperity Education Index represents intellectual capital as a part of human capital, the variable of the Prosperity Social Capital Index represents social capital as a part of human capital, and the GNP per capita represents the world's economic development. This concerns official statistical data on 52 countries published by the London Legatum Institute in 2009. The Prosperity Index accounts for 90 percent of the world's population, providing a reliable guide to the world's most and least prosperous countries. Based on years of statistical analysis and research into the most important ingredients of economic growth and well-being, the Index uses a combination of objective data and subjective responses to surveys. This data comprises 79 different variables, distilled into nine different sub-indexes, each of which has been identified as a foundation of prosperity. The variables have varying degrees of influence in each sub-index which is portrayed in the bar graphs in the pages to follow. A country's performance in each sub-index is given a score, and the overall Prosperity Index rankings are produced by

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<sup>1</sup> Data collected and the methodology of collecting data and calculating results are found and explained on the web: <http://www.li.com> (01. 06. 2010). The matrix of collected and analyzed data with the list of countries included in the research is provided in the appendix (Table 3).

averaging the scores of the nine sub-indexes for each country. Those countries that perform well across each sub-index do best in the overall rankings.

The Corruption Index ranks countries in terms of the degree to which corruption is perceived to exist among public officials and politicians. It is a composite index, a poll of polls, drawing on corruption-related data from expert and business surveys carried out by a variety of independent and reputable institutions. The Corruption Index focuses on corruption in the public sector and defines corruption as the abuse of public office for private gain. The surveys used in compiling the Corruption Index ask questions that relate to the misuse of public power for private benefit; for example, bribery of public officials, kickbacks in public procurement, embezzlement of public funds or questions that probe the strength of anti-corruption policies, thereby encompassing both administrative and political corruption.

The Education sub-index takes account of the way in which a country's educational institutions and practices contribute to its economic performance. It has become common wisdom that in today's growing services economy, which is fuelled largely by knowledge and its applications, education is critical to economic progress and opportunity. Education has also long been an important growth factor in productive economies and it is just as important in regions and countries dependent on manufacturing and agriculture. Along with the economic opportunities education affords, it is also a critical – some might say the critical – driver of opportunity for women and minority populations. The Education sub-index assesses a country's educational performance primarily by measuring the years of schooling that a nation's citizens complete, combined with expenditures on education and other factors that help gauge educational quality. Finding global coverage of educational performance measures, as represented in test scores, is virtually impossible and, therefore, we rely on years of schooling and related factors as close approximations. Of all the variables in the sub-index, secondary enrolment rates and average years of tertiary education have the strongest relationships with economic growth. In addition, the sub-index includes measures of female educational participation, which is an important indicator of how widely opportunity is expanding in a given country and is inescapably essential to a nation's overall economic success over time.

The Social Capital sub-index measures how well people in the countries in the Prosperity Index are developing social networks and relationships that are trustworthy and supportive. Being able to rely on friends, family, and even strangers during times of need is critical to life satisfaction. Relationships built

on trust are gratifying and enjoyable but also vital when other areas of life such as our health, job, or government fail us. Accordingly, the Social Capital sub-index measures the importance that citizens place on social capital through how much they trust, value, and associate with others, as well as the extent to which they engender social capital through the amount that citizens rely on others, donate, help a stranger, or volunteer. The field of social capital and its relation to well-being is still evolving, and therefore, the data and measurement tools necessary to evaluate social capital are still limited. This sub-index uses empirical data that demonstrate that valuing friends and family and being able to rely on them, trusting people, and voluntarily participating in associations are the most significant variables in social capital. However, due to limitations in data, the sub-index does not assess another significant element of social capital: the level of collective action in a society. The ability of citizens to gather and become more effective through cooperative efforts is a key element that this sub-index aims to capture in future iterations.

### **3.1. Analysis of research results**

Collected data are processed and analyzed with the SPSS statistical package by applying exponential functions and analysis of the matrix of linear correlation and the matrix of multiple linear correlations.

### **3.2. The influence of the corruption index to GNP per capita**

The research observed the influence of the variable of the Corruption Index on the economic development of 52 countries or on the variable of the GNP per capita. As demonstrated by Figure 1, GNP per capita (blue line) increases with the growth of the Corruption Index with lesser and irregular deviations. Also, in the same graph, it can be concluded (red curve), and the working function is  $y = 2596,3e^{0.060x}$ , how there is a validity of influence of the variable of the Corruption Index on the GNP per capita or that with the increase of the Corruption Index (the methodology of calculating the Corruption Index says that the higher the Corruption Index is in a certain country, the lower the level of corruption really is), the GNP per capita of the countries also increases, where by the graph shows how the rate of the GNP per capita growth increases as the Corruption Index increases.

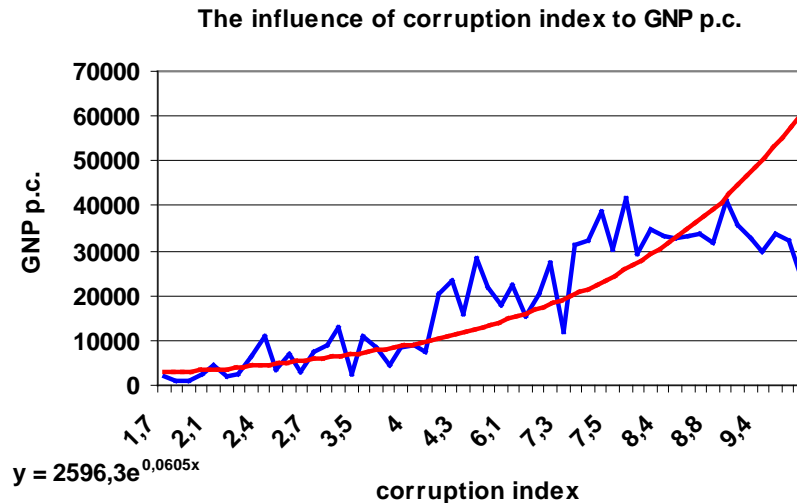


Figure 1. The influence of corruption index to GNP p.c.

Therefore, it could be concluded that, in highly undeveloped countries, which have a low moral capital, or high social corruption, the repression of corruption gives less positive effects. Meanwhile, as the level of countries' development increases, the reduction of social corruption gives higher positive effects on growth and development.

### 3.3. Impact of corruption index, education and social capital on economic development

Research also observed the influence of different segments of human capital on economic development of the countries, or, the influence of a variable of the Corruption Index, the variable of the Prosperity Education Index and the variable of the Prosperity Social Capital Index on the GNP per capita variable. As analysis of the linear correlation matrix in Table 1 demonstrates, all segments of human capital, i.e. all three variables, have a positive influence on the GNP per capita.

The Corruption Index variables (0.91) and Prosperity Education Index (0.88) have a very significant influence on the GNP per capita, while the Prosperity Social Capital Index (0.55) variable has a positive, yet not so significant influence on the GNP per capita.

Table 1. Linear correlation matrix of variables: Corruption Index, Prosperity Education Index, Prosperity Social Capital Index and the GNP p.c.

Linear correlation matrix				
	Corruption Index	Prosperity Education Index	Prosperity Social Capital Index	GNP p.c.
Corruption Index	1.00	0.8	0.53	0.91
Prosperity Education Index	0.8	1.00	0.27	0.88
Prosperity Social Capital Index	0.53	0.27	1.00	0.55
GNP p.c.	0.91	0.88	0.55	1.00

As analysis of the multiple linear correlation matrix in Table 2 demonstrates, with the square of coefficient 0.92 in interaction of the three variables observed and the dependent variable of the GNP per capita, all of the human capital variables observed have a positive influence on the dependent variable.

Table 2. Multiple linear correlation matrix of variables: Corruption Index, Prosperity Education Index, Prosperity Social Capital Index and the GNP p.c.

Multiple linear correlation matrix	
Constant	20 949
Square coefficient	0.92
Standard error of regression	3 896
Number of observations	52
Degrees of freedom	48
Dependent variable	GNP p.c.
Variable	coefficient
Corruption index	8.5
Prosperity education index	2.1
Prosperity social capital index	0.5

The Corruption Index variable has the most positive influence, followed by the variable of the Prosperity Education Index and, finally, the variable of the Prosperity Social Capital Index.

#### 4. SYNTHESIS OF RESEARCH RESULTS

The goal of this research was to test the hypothesis on human capital having a positive and significant influence on the world's economic development and that those countries which have more developed human capital are, on average, with more developed economies and have a greater rate of economic growth. Furthermore, this research tested the hypothesis on segments of human capital (moral, intellectual and social) also having a positive influence on the world's economic development, where, on average, moral capital has the most influence, followed by intellectual and social.

As it can be seen from the results of the research, the hypothesis that human capital has a positive and significant influence on the economic development of countries, and that the countries with more developed human capital have, on average, significantly more developed economies and have higher rates of economic growth, has shown positive. Also, the research has proven positive the hypothesis that the segments of human capital, moral, intellectual and social, also have a positive influence on the economic development of countries; with that, the moral capital, on average, has the most influence on the economic development of a certain country, followed by intellectual and finally, social capital.

Furthermore, the analysis has shown how with the increase of the Corruption Index, the GNP per capita also grows, and also that the GNP per capita growth rate increases with the increase of the Corruption Index, or as social corruption decreases in certain countries. The results also show that variables of moral and intellectual capital have a very significant and positive influence on the GNP per capita, while the variable of social capital has a positive, yet not significant, influence on the GNP per capita.

The goal of every national economy and economy politics worldwide is to ensure a larger capital development rate of the population, as well as through the optimal investment in people by raising their moral, intellectual and social capital, accomplishing even larger rates of economic growth, higher levels of economic development and living standards of all of its population. To achieve that goal, a systematic approach in handling human resources with the implementation of economy politics is needed, along with a moral system of values, a legal and legislative system which will encourage and reward honest forms of behaviour, an educational system which will achieve optimal build-up of knowledge, skills and abilities of educational staff, and a network of national, local and civil organizations which will encourage social bonding and

cooperation of all of its population. The investment process must go in reverse, instead of the former, preferential investment in corporal capital, infrastructure, buildings, working machines, equipment, etc. Furthermore, investments should be made primarily in people and only then will developed human capital, with investments in corporal capital, produce much larger new capital and new values.

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#### **ANALIZA UTJECAJA POKAZATELJA KORUPCIJSKOG INDEKSA, OBRAZOVANJA I DRUŠTVENOG KAPITALA NA EKONOMSKI RAZVOJ**

##### **Sažetak**

Istraživanje, koje analizira utjecaj pokazatelja korupcije, obrazovanja i socijalnog kapitala na razinu razvoja podijeljeno je na tri dijela. U prvom se dijelu izlaže kratki teorijski okvir značaja različitih sastavnica ljudskog kapitala za prepoznatljivost i rezultate poduzeća, pri čemu se posebno analizira djelovanje (faktor relevantnosti) za svaki od uočenih segmenata ljudskog kapitala. U drugom dijelu rada, prezentiraju se metodologija i podaci korišteni u empirijskom istraživanju. Nadalje se raspravlja o rezultatima empirijskog istraživanja, u kome su se testirale hipoteze o djelovanju ljudskog kapitala i njegovih komponenti na razinu ekonomskog razvoja. Cilj ovog istraživanja je bilo testiranje hipoteze o pozitivnom i značajnom djelovanju ljudskog kapitala na ekonomski razvoj u svijetu. Nadalje, postavljena je i hipoteza da su zemlje s višom razinom ljudskog kapitala, u prosjeku, razvijenije i imaju veće stope rasta. Nadalje, analizirana je i hipoteza o pozitivnom i značajnom djelovanju pojedinih segmenata ljudskog kapitala na ekonomski razvoj u svijetu, pri čemu se pretpostavlja da, u prosjeku, moralni kapital ima najveći utjecaj, praćen intelektualnim i socijalnim kapitalom.

**APPENDIX**

*Table 3. Collected and analyzed data from a list of analyzed countries*

Analyzed countries	Corruption Index	Prosperity Education Index	Prosperity Social Capital Index	GNP p.c.
Australia	8.8	6	4	31794
Austria	8.7	13	23	33700
Bangladesh	1.7	89	72	2053
Belgium	7.4	11	26	32119
Brazil	3.7	58	62	8402
Bulgaria	4	37	101	9032
Cameroon	2.2	92	35	2299
Canada	8.4	16	9	33375
Colombia	4	62	75	7304
Czech Republic	4.3	31	74	20538
Chile	7.3	49	85	12027
Croatia	3.4	40	46	13042
Denmark	9.5	2	13	33973
Estonia	6.4	35	94	15478
Finland	9.6	3	6	32153
France	7.5	15	48	30386
Germany	8.2	19	19	29461
Ghana	3.5	93	24	2480
Greece	4.3	5	51	23381
Honduras	2.6	78	55	3430
Hong Kong	8.3	39	33	34833
Hungary	5	23	92	17887
Ireland	7.4	18	12	38505
Italy	5	17	37	28529
Jamaica	3.6	71	61	4291
Japan	7.3	20	40	31267
Kenya	2.1	95	25	1240
Macedonia	2.7	57	88	7200
Mexico	3.5	60	45	10751
Netherlands	8.6	14	8	32684
New Zealand	9.6	10	1	24996

<b>Nigeria</b>	1.9	94	16	1128
<b>Norway</b>	8.9	1	10	41420
<b>Pakistan</b>	2.1	101	36	2370
<b>Paraguay</b>	2.1	74	53	4642
<b>Portugal</b>	6.5	29	64	20410
<b>Romania</b>	3	41	102	9060
<b>Russia</b>	2.4	28	84	10845
<b>Singapore</b>	9.4	26	76	29663
<b>Slovakia</b>	4.3	36	69	15871
<b>Slovenia</b>	6.1	8	44	22273
<b>South Korea</b>	5	30	31	22029
<b>Spain</b>	7	12	71	27169
<b>Sudan</b>	2.1	97	32	2083
<b>Sweden</b>	9.2	4	3	32525
<b>Switzerland</b>	9.1	22	2	35633
<b>Turkey</b>	3.5	68	103	8407
<b>Ukraine</b>	2.6	32	89	6848
<b>United Kingdom</b>	8.6	21	11	33238
<b>USA</b>	7.6	7	7	41890
<b>Venezuela</b>	2.3	66	54	6632
<b>Vietnam</b>	2.6	81	63	3071

